

**REMARKS**

Claims 1, 2, 4-12, and 14 are currently pending in the application, with claims 1 and 9 being independent claims. Of the pending claims, claims 1, 2, and 4-8 are under consideration, and claims 9-12 and 14 are withdrawn from consideration. No claims are amended, added, or canceled by this response. Reconsideration of the rejected claims in view of the following remarks is respectfully requested.

**Response to Restriction Requirement**

The Office Action maintains the restriction requirement and makes the requirement final. In response, Applicants respectfully remind the Examiner of the unity of invention practice under PCT Rule 13.1 and 37 C.F.R. § 1.475, i.e., that the Office will be required to withdraw the Restriction Requirement if the claims share a common special technical feature.

**Response to Rejection under 35 U.S.C. § 102(b)**

The Office Action rejects claims 1, 2, and 4-6 under 35 U.S.C. § 102(b) as allegedly anticipated by, or in the alternative under 35 U.S.C. § 103(a) as obvious over, JP 03-065579, hereafter the '579 document. The Office describes the '579 document as disclosing a ceramic material having a calcium phosphate coating, wherein said coating "appears" to have "the same materials and the same technique to form the porous ceramic membrane" as the presently claimed invention.

As the Examiner specifically states that the '579 document "appears" to have "the same materials and the same technique to form the porous ceramic membrane," the rejection is clearly

based on a theory of inherency. Applicants respectfully remind the Examiner that in order for inherency to be present the Examiner has the burden of showing that the result indicated by the Examiner is the *necessary* result, and not merely a *possible* result (see, *In re Oelrich*, 666 F.2d 578, 581, 323 212 U.S.P.Q. 323, 326 (CCPA 1981). Thus, the fact that the claimed invention *may* be present is not sufficient. *Ex parte Skinner*, 2 U.S.P.Q.2d 1788 (BPAI 1986).

Additionally, Applicants note that a rejection under 35 U.S.C. § 102 can only be maintained if every element of the rejection is found in a single prior art document. Applicants respectfully submit that the '579 document fails to disclose every element of the rejected claims. Claim 1, for example, is directed to "a porous calcium phosphate ceramic body comprising a substrate having fine pores, and three-dimensional nanotunnel layers formed on wall surfaces of said fine pores and having pluralities of three-dimensionally connected nanotunnels." The '579 document fails to teach three-dimensional nanotunnel layers having pluralities of three-dimensionally connected nanotunnels.

Applicants respectfully note that the present specification teaches the conditions under which the claimed three-dimensional nanotunnel layers are made. To obtain such structures, the present specification teaches complete immersion of the substrate in a well-defined slurry, followed by defoaming the slurry under a reduced pressure (see, for example, paragraphs [0042] – [0050]). The '579 document, however, uses a process that would not result in such structures, and fails to teach the use of such process. For example, the '579 document teaches that the hydroxyapatite slurry is *atomized* by using spray nozzles to apply a membrane *onto* the substrate. Such atomization and spraying of the slurry would not result in "three-dimensional nanotunnel layers formed on wall surfaces *of said fine pores*." Applicants respectfully submit that the '579

document fails to teach the formation of three-dimensional nanotunnel layers “on wall surfaces of said fine pores,” as claimed in claim 1 of the present application.

To the extent the Office Action is asserting that the present invention would be obvious over the '579 document, Applicants respectfully disagree. There is nothing in the '579 document that suggests the desirability of forming the nanotunnel structures on the walls of the pores, and there is nothing in the '579 document that would lead to the use of a process that would result in such structures. Absent such teaching or suggestion, the '579 document cannot render obvious the presently claimed invention.

Accordingly, for at least the foregoing reasons, the '579 document fails to disclose and/or suggest the invention of independent claim 1, and therefore, withdrawal of the rejection of claims 1, 2, and 4-6 under 35 U.S.C. §§ 102(b) and 103(a) is respectfully requested.

#### **Response to rejections under 35 U.S.C. § 103**

The Office Action rejects claims 7 and 8 under 35 U.S.C. § 103(a) as allegedly being unpatentable over JP 03-065579 as applied to claim 1 above, and further in view of JP 2003-073182. The Office Action repeats the assertion that the '579 document anticipates or strongly suggests the presently claimed invention as applied in claim 1, and concludes that it would be obvious to combine the '579 document with the disclosure of JP 2003-073182 (“the '182 patent”), which allegedly teaches calcium phosphate substrate material having a porosity of 5 to 50% and a Ca/P ratio from 1.5 to 1.7 for bone substitution.

In response, Applicants respectfully note that claims 7 and 8 depend ultimately from claim 1 and are patentable for at least the same reasons that claim 1 is patentable over the '579

document. Moreover, despite the Office Action's assertions regarding reasons for combining the teachings, there is nothing in either the '579 document or in the '182 patent that would have led to their combination.

Applicants respectfully request withdrawal of the rejection of claims 7 and 8 for obviousness.

### **Response to Double Patenting Rejection**

The Office Action provisionally rejects claims 1, 2, and 4-6 under nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 1, and 3-5 of copending Application No. 10/996,434. Applicants respectfully note for the Examiner that the '434 application issued October 9, 2007 as U.S. Patent No. 7,279,219. The Office Action further provisionally rejects claims 7 and 8 under nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 1, and 3-5 of copending Application No. 10/996,434, in view of JP 2003-073182.

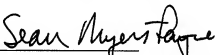
Applicants are preparing a Terminal Disclaimer and will submit the same shortly, and such submission will obviate the rejection.

### **CONCLUSION**

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections of record, and allow each of the pending claims. Applicant therefore respectfully requests that an early indication of allowance of the application be indicated by the mailing of the Notices of Allowance and Allowability.

Should the Examiner have any questions regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
Toshio MATSUMOTO et al.

  
\_\_\_\_\_  
Bruce H. Bernstein  
Reg. No. 29,027 42,920

October 18, 2007  
GREENBLUM & BERNSTEIN, P.L.C.  
1950 Roland Clarke Place  
Reston, Virginia 20191  
(703) 716-1191